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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,946	02/20/2004	Kevin G. Hetzler	1035-O4334	4819

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EXAMINER	
ZACHARIA, RAMSEY E	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/783,946	HETZLER ET AL.	
	Examiner	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) *47 and 48* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/18/05; 1/18/05; 2/20/04; 11/28/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on 28 November 2005 is acknowledged. The traversal is on the ground(s) that the Examiner has failed to establish a serious burden in examining all the claims together and that different classifications as recited by the USPTO are not independent adequate grounds for restriction. This is not persuasive because the inventions have acquired a separate status in the art as was shown by their different classification (Group I in class 428 and Group II in class 156). That the inventions have acquired a separate status in the art constitutes a *prima facie* showing of a serious burden on the Examiner. See MPEP § 803.

Because the inventions are distinct for the reasons put forth in paragraph 2 of the action mailed 28 October 2005 and have acquired a separate status in the art, the restriction is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **300**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the

sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-11, 16-22, and 25-30 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a multi-layer film having a second layer comprising a melt strain-hardening polymer, does not reasonably provide enablement for a second layer comprising a non-polymeric melt strain-hardening component. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification does not provide any guidance to one skilled in the art on how to make a multi-layer film having a second layer comprising a melt strain-hardening component that is not a polymer.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 14 recites the limitation "the linear chain non-olefin polymer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 9-27, 29-35, 37-40, and 42-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Strassel (U.S. Patent 4,317,860).

Strassel ('860) teaches a laminate comprising a PVDF layer, a thermoplastic layer, and a polyalkyl methacrylate layer (column 2, lines 13-20). The PVDF layer corresponds to the first layer of claim 1 and the second layer of claim 31. The polyalkyl methacrylate layer corresponds to the second layer of claim 1 and the first layer of claim 31. In the embodiments of the Examples, the polyalkyl methacrylate layer comprises 2 to 8% of the film thickness (i.e. volume). The polyalkyl methacrylate layer preferably comprises PMMA (cited in the instant specification as a representative melt strain hardening polymer) and may also comprise up to

70% of another thermoplastic polymer such as a fluorinated polymer or an acrylic elastomer (i.e. an impact grade acrylic) and commonly used fillers (i.e. particles that would create a particulate phase) (column 3, lines 43-50 and column 4, lines 9-27). The laminate may further comprise an additional polyalkyl methacrylate layer and PVDF layer in the form of the five layer structure PVDF/polyalkyl methacrylate layer/thermoplastic polymer/polyalkyl methacrylate layer/PVDF (column 2, lines 58-68). The second polyalkyl methacrylate layer reads on the third layer of claims 25 and 30. The second PVDF layer reads on the fourth layer of claim 27 and the third layer of claim 42.

Regarding claims 16-21, 31, and 43-46, the relationship between tensile force and draw ratio is taken to be a material property. Because the polyalkyl methacrylate layer of Strassel ('860) uses the same material as that of the second layer of claim 1 and the first layer of claim 31 (i.e. a polymethyl methacrylate or a polymer composition comprising 70% of an acrylic elastomer), the polyalkyl methacrylate layer is taken to inherently possess the same relationship between tensile force and draw ratio as the instant melt strain-hardening component.

Regarding claims 22, 23, 33, a polyalkyl methacrylate layer comprising 70% of an acrylic elastomer reads on a layer comprising greater than about 70% of an impact grade acrylic because "*about* 70%" encompasses values less than 70%. Therefore, 70% is encompassed in the range greater than about 70%.

Regarding claim 24, the second polyalkyl methacrylate layer in a five layer laminate comprising up to 70% of a fluorinated polymer in the polyalkyl methacrylate layer would read on the internal layer comprising greater than about 40% fluorinated polymer.

10. Claims 1-6, 9, 11-33, and 35-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Strassel (US 2002/0068175 A1).

Strassel ('175) teaches an article having at least three layers comprising a PVDF layer, an opaque PVDF layer, and an adhesive layer (paragraph 0006). The article may be applied to a fourth layer composed of an acrylic elastomer (paragraph 0015). Up to 40% of an acrylic polymer (i.e. a melt strain-hardening component) may be added to the PVDF material (paragraph 0017). The adhesive layer may be formed of a methacrylate polymer, such as PMMA or a methacrylate elastomer (paragraph 0023 and 0036-0039). One of the PVDF layers corresponds to the first layer of claim 1 and the second layer of claim 31 while the adhesive layer corresponds to the second layer of claim 1 and the first layer of claim 31. In the embodiment of Example 3, the article is composed of a 1st PVDF layer (43% vol), a 2nd PVDF layer (35% vol), and an adhesive layer that comprises 30% PVDF (22% vol). In the embodiment of Example 1, the adhesive layer comprises about 1% of the total volume.

Regarding claims 16-21, 31, and 43-46, the relationship between tensile force and draw ratio is taken to be a material property. Because the adhesive layer of Strassel ('175) uses the same material as that of the second layer of claim 1 and the first layer of claim 31 (i.e. a methacrylate polymer such as polymethyl methacrylate a methacrylate elastomer), the adhesive layer is taken to inherently possess the same relationship between tensile force and draw ratio as the instant melt strain-hardening component.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 3-8 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strassel (U.S. Patent 4,317,860).

Strassel ('860) discloses that their laminate may comprise three or five layers: (a) PVDF, (b) polyalkyl methacrylate layer, (c) thermoplastic polymer, optionally (d) polyalkyl methacrylate layer, and optionally (e) PVDF (column 2, lines 58-68). Strassel ('860) further discloses that the polyalkyl methacrylate layer may contain up to 70% of a fluorinated polymer (column 4, lines 9-27). Strassel ('860) further discloses thicknesses for the layers as: 10 to a few tenths of a millimeter for the PVDF layers (column 3, lines 35-39), a few microns to 200 μm for the polyalkyl methacrylate layers (column 4, lines 28-30), and a few tens of microns to several millimeters for the thermoplastic polymer layer (column 4, lines 47-49). That is, Strassel ('860) discloses a laminate comprising the combination of:

(a) PVDF - 10 to a few 100's of μm,

(b) polyalkyl methacrylate - a few microns to 200 μm,

(c) thermoplastic polymer - few tens of microns to several 1000's of microns,

optionally (d) polyalkyl methacrylate - a few microns to 200 μm, and

optionally (e) PVDF - 10 to a few 100's of μm,

Therefore, a laminate could be constructed directly from the teachings of Strassel ('860) such that: layer (a) would correspond to the first layer of claim 1, layer (b) would correspond to the second layer of claim, layer (c) would correspond to the fourth layer of claim 7 (since the thermoplastic polymer may be an acrylic elastomer), layer (d) would correspond to the third layer of claim 3 (since the polyalkyl methacrylate layer may contain up to 70% of a fluorinated polymer), and layer (e) would correspond to the fifth layer of claim 7. Alternatively, a laminate could be constructed such layer (a) comprised greater than about 20 vol% of the film - e.g. (a) a few 100's of microns, (b) a few microns, and (c) a few tens of microns.

Because all these combinations of layer compositions and thicknesses are explicitly taught by Strassel ('860), it would be obvious to one skilled in the art to pick and choose from any of the disclosed combinations with a reasonable expectation of success.

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strassel (US 2002/0068175 A1).

Strassel ('175) teaches all the limitations of claim 10, as outlined above, except for explicitly reciting an embodiment wherein the adhesive layer comprises about 5% by volume of the film. However, the thicknesses of the layers in the laminate are given as: 10-300 μm for the first PVDF layer, 10-300 μm for the second PVDF layer, and 10-200 μm for the adhesive layer (paragraphs 0024-0027).

A laminate wherein the adhesive layer comprises about 5% of the total volume may be formed by adjusting the thicknesses of each layer within the ranges explicitly disclosed. As such, it would be obvious to one skilled in the art to form a laminate such that the adhesive layer

comprises about 5% of the total volume because there is a reasonable expectation of success for picking and choosing from within any of the disclosed thicknesses.

Double Patenting

14. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

15. Claims 1-46 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-46 of copending Application No. 10/901,910. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).